

Army Space and Missile Defense: Global Perspective & Experience for a Global War



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From the beginning, U.S. Army Space and Missile Defense Command (SMDC) and Army Space Command soldiers and civilians have been fully engaged in a myriad of actions supporting Operations Noble Eagle and Enduring Freedom. SMDC has deployed soldiers, civilians, and contractors worldwide and has brought a global perspective and experience to the global fight. Our Army Space and Missile Defense team has provided Army Space Support Teams with new operational capabilities, provided Space-based images of numerous regions of the world, created 3-D fly-throughs for pilots, tracked force movements across remote regions of the world, planned for the Homeland Defense, and more. While the specifics on much of what we have done are classified, some of our activities since September 11 can be addressed in a general manner.

The Army Space Operations Center (ARSPOC) in Colorado Springs is providing reach-back Space and communications support around the clock. All taskings and mission directives from the Commander-in-Chief, U.S. Space Command (CINCSpace) are handled here. In addition to providing the command and control and operational status of Army Space forces, the ARSPOC pushes information forward to Space operations officers worldwide supporting our warfighters. It provides a reach-back one-stop-shop for Space operations officers when they need information and support. The ARSPOC has provided 24/7 support to CINCSpace, the Army, and Space officers around the globe.

The Command provided and continues to provide spectral information and services to strategic-level commanders to use in their decision-making processes. Their requests for support started flowing into our Spectral Operations Resource Center (SORC) beginning September 11. Several great articles about this are in

this issue of the journal.

The SMDC Battle Lab in conjunction with the SORC developed the satellite multi-spectral imagery mapping that the resource center has used to provide various terrestrial images to commanders. That technology was also used to produce the 3-D fly-throughs.

The SMDC Battle Lab provided a "future operational capability" to the Air Force to enhance command and control on situational awareness. The Battle Lab was the only organization that had it and the Air Force needed it. No hint of Service rivalry, Service infighting, or budget concerns got in the way of providing commanders with what they needed to accomplish their missions. As a result, this "future operational capability" was used during an actual operation, an unprecedented way to do research, development, and fielding business. This led the directors of the Battle Lab and the Force Development and Integration Center to distribute to the Army staff a "Capabilities Catalog" describing all the Army Space systems available to commanders.

We completed standing up the Space-Based Blue Force Tracking Mission Management Center (MMC) in conjunction with U.S. Space Command's J3. (We are the lead service component for Blue Force Tracking.) The center keeps track of U.S. - designated forces and equipment in remote regions of the world and feeds accurate and timely information into the commanders' common operating pictures. The Mission Management Center operates 24 hours a day, seven days a week. Support from the 193d Space Support Battalion, Colorado Army National Guard, has been instrumental in manning and operating the MMC. National Guard soldiers volunteering for this duty, were screened for their operational expertise and security clearances, mobilized, trained, and certified.

Our role across the full spectrum of military operations has been clearly recognized. We have been called upon like never before to provide services, products, and expertise at the strategic, as well as, operational and tactical levels.

The Army Space Program Office (ASPO) began fielding the Grenadier BRAT (Beyond-line-of-sight Reporting and Tracking) in October 2001. This system works in conjunction with Space-based Blue Force Tracking to give commanders the ability to track friendly forces in near-real time.

While the Grenadier BRAT is a new system, ASPO's Tactical Exploitation of National Capabilities Program (TENCAP) is in its 29th year and still fulfilling the warfighter's needs. The Space Program Office developed TENCAP systems, with their ability to receive and process data from a robust suite of national, theater, and tactical sensor systems, to form an integral part of the Department of Defense intelligence architecture. ASPO has leveraged the national technology to downlink national strategic systems to tactical levels. This data provides commanders and tactical units with timely targeting, battle planning, and battle damage assessment information, and with an accurate and current picture of the enemy and terrain during planning and execution. National data combined with data from other sources significantly enhances the Intelligence Preparation of the Battlefield. TENCAP secondary dissemination and intelligence broadcast capabilities provide continuing awareness through all phases of operations. They provide the tactical commander the ability to see, hear and target deep, and then assess the impact of shooting deep.

Army Space Command has addressed new responsibilities in support of U.S. Space Command efforts to better plan for, synchronize, integrate, and coordinate Space and information operations support to the combatant CINCs. In order to enhance support, U.S. Space Command established a Space and Information Operations Element. U.S. Space Command tasked Army

Space Command and its other service components to support the forward deployed and reach-back Space and information elements. Army Space Command met its component responsibility by providing Army Space and information operations planning expertise. The Army's Land Information Warfare Activity and their Field Support Teams also provided critical Army expertise in support of this effort.

Our Regional Satellite Communications Support Centers provided planning and management of Department of Defense communications satellites. They optimized scarce communications resources for the CINCs and their components. They configured and/or reconfigured numerous communications networks to support each phase of the operation. These networks provide critical command and control connections forward to deployed forces as well as back to the United States.

The 1st Satellite Control Battalion which performs payload and network control of the Defense Satellite Communications System saw a doubling of the missions they were supporting after September 11. The battalion not only provides support to the Secretary of Defense, Joint Staff, military services, and a number of different agencies including the intelligence community, but they also provide critical telephonic and internet communications for forward deployed forces.

Just as important to our Space mission is the effort to integrate air and missile defense. The command has traditionally supported the North American Aerospace Defense Command (NORAD) with a cell specifically designed to plan for Ground-based Midcourse Defense, formerly known as National Missile Defense. After September 11, this cell expanded to plan a multi-tiered

(See DCG, page 34)

SORC ... from Page 13

bullet” for Space Operations Officers or other warfighters. As the Army’s Space professionals, inside knowledge of these spectral successes and the ability to tap the SORC will help in the larger context to “normalize” Space while providing another reliable and responsive Space support tool for commanders at all levels.

The SORC can be tasked through the U.S. Space Command or Army Space Operations Center, and the Army Space Command G3.

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End notes

1. From After Action Review notes of Dave Carruthers, FDIC Liaison to TRADOC Seminar War Game III, October 2001. Email dated October 22, 2001, Subject: Tradoc Seminar Wargame III, david.carruthers@monroe.army.mil
2. Why the Army Has Space Operations Officers, by BG Richard V. Geraci, JASO, Vol.1, No.1, September 2001
3. US Army Space Command SIPRNET website at <http://arspdb2.armySpace.Spacecom.smil.mil/MSI>
4. Ibid.
5. NIMA Spectral Image Map SIPRNET website at <http://www.nima.smil/products/armysim/index.html>

DCG ... from Page 5

air defense structure using ground-based air defense assets to support homeland security. Army Space Command has worked extensively with NORAD to develop plans and potential options to support homeland defense. Operation Noble Eagle changed the dynamics of how we address air defense of the Nation. Army Air Defense soldiers from various commands, active, reserve, and National Guard, Department of the Army Civilians, and contractors have worked together to complete comprehensive studies and analysis on defending national assets, as well as to conduct exercises and demonstrations, to determine tactics, techniques, and procedures to protect critical assets. We are a part of the joint team working to protect North America with a seamless air and missile defense.

Since September 11, Space operations officers at all levels of command have been engaged in current operations to support the entire Army. This has been a particularly exciting time to be assigned to and supporting Army Space and Missile Defense Command. Our role across the full spectrum of military operations has been clearly recognized. We have been called upon like never before to provide services, products, and expertise at the strategic, as well as, operational and tactical levels. We have created new products, found ways of doing things better and faster, created tactics, techniques and procedures where none existed, identified areas of doctrine that need to be updated, gathered lessons learned, improved the integration of civilians and contractors into operations, mobilized Reserve Component Space officers and soldiers to man newly created elements and centers. We have met the warfighter’s requests for support, products, and expertise without exception. Every member of this command and our Space operations officers stationed worldwide can be proud of the support we’ve provided in this global war.

FRONTIER ... from Page 23

for the future without losing one’s grip on what is enduring in the conduct of war. In the case of Space, the future promises unprecedented capabilities to acquire and communicate information, exert command and control, enhance the performance of surface and air systems, and ultimately expand the reach of military power. What endures is the reality that the ultimate test of military Space capabilities remains their impact on what transpires on the surface, for it is there that the political impact of military operations finally must be measured.

Space is already becoming a domain not unlike the high seas. However, in contrast to maritime usage, international law and custom relating to Space remain largely undeveloped. But that condition will not endure much longer. Whether we like it or not, because Space has become militarily significant, there is no going back. That it will be so exploited, by others as well as ourselves, is no longer in question.

Accordingly, the time has come for the United States to begin in earnest to define political guidelines for the military utilization of Space. Our great challenge is to manage the exploitation of technology’s promise in a manner that preserves and reinforces the capacity of our democratic leaders to control a future crisis. By that measure we will know if our nation and the world are made more secure.

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The Army After Next project, directed by the U.S. Army Training and Doctrine Command, which looked 15-25 years into the future and explored technological and operational concepts dramatically different from those of the present.